

WATER CORPORATION OF WESTERN AUSTRALIA

**GOLDFIELDS AND AGRICULTURAL WATER SUPPLY
HISTORY PROJECT**

Transcript of interview with

JOHN EDWARD DAVIS

Public Works Department engineer; educated at Eastern Goldfields High School and the University of Western Australia (1942-45, BE), joined the Hydraulic Engineer's Branch of the PWD in April 1946 working on irrigation and water supply projects; District Engineer for south-eastern wheat-belt (1948), Resident Engineer on raising of Wellington Dam (1951), seconded to BP Australia to supervise construction of Kwinana Oil Refinery (1953-54); transferred to Goldfields Water Supply Branch as District Engineer Kalgoorlie (1954), recalled to Head Office in 1956 to work on Comprehensive Water Supply Scheme, Senior Engineer (North) of the Country Water Supplies Branch (1962), Chief Engineer PWD Operations North (1975), retired in 1986 and died in 2003.

Access
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Interviewer:	Richard G Hartley
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Transcriber:	Anne McBride
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JOHN EDWARD DAVIS

BIOGRAPHICAL NOTES

Jack Davis was born in Boulder, in the Eastern Goldfields, on 22 April 1924 and was educated at Central School, the Eastern Goldfields High School and the University of Western Australia where he studied engineering, having been awarded a University Exhibition and a De Bernales Scholarship. The scholarship paid for his accommodation at St George's College and his employment in the Boulder mines was arranged over the Christmas vacations except for one summer when he was one of six Western Australian students employed by BHP at its Whyalla shipyard in South Australia. In vacation work at the mines he was engaged in underground surveying, and in the assay office and electricians' shop at the Great Boulder Pty mine.

Davis completed the three year UWA wartime degree, BSc Eng, at the end of 1944 and in 1945 returned to the University to upgrade his degree to BE, majoring in Civil Engineering. On completion of his studies he went on a Gledden Fellowship study tour to the eastern states during which he accompanied Professor Blakey, Professor of Civil Engineering at the University of Western Australia, the current National President of the Institution of Engineers, Australia, on his Presidential tour. He joined the Irrigation and Drainage Section of the Hydraulic Engineer's Branch of the Public Works Department of Western Australia in April 1946 and, after twelve months in the drawing office, he worked on the construction of Harvey East Drain, Waroona town water supply, a dam near Carnamah and irrigation works at Harvey.

In November 1948 he was appointed District Engineer for the South-eastern Wheat-belt, residing first at Lake Grace and then at Kulin. While at Lake Grace he married Dolores and they moved into one of the first houses to be supplied by the department to district engineers, a very small demountable building. In his district Davis was responsible for dams and water supplies over a large area including Hopetoun, Corrigin, Quairading, Hyden, Karlgarin and Newdegate and for developing the design and construction of roaded water supply catchments. In August 1951 he was appointed Resident Engineer for the raising of Wellington Dam, one of the two source dams for the Comprehensive Water Supply Scheme but, in mid-1952, the project was temporarily closed down as funds were diverted to the provision of infrastructure for the Anglo-Iranian Oil Refinery at Kwinana. After a year in Head Office working on the development of further rural water supply schemes Davis was seconded to Australasian Petroleum Refinery Ltd (later BP Australia) at Kwinana where he was responsible, under the Resident Engineer, from August 1953 to April 1954, for the supervision of all civil works construction for the refinery, valued at \$80 million (in 1954 money values).

After a further six months in head office planning country water supplies, in November 1954 Davis was transferred to the Goldfields Water Supply (GWS) Branch of the PWD as District Engineer, Kalgoorlie (a Grade 1 or Level 3 position). In addition to being responsible for the maintenance of over a third of the length of the main Mundaring to Kalgoorlie conduit and its extensions in the goldfields, Davis was also responsible for the construction, maintenance and operation of all other PWD water supplies in the large Kalgoorlie engineering district which extended from Leonora and Laverton in the north to Norseman and Esperance in the south. He supervised the continuing reconstruction above ground of the formerly buried main conduit and the replacement of the leaded joints between pipes with continuous welding and the replacement or reconstruction of the

40 miles of wood stave pipes in the Kalgoorlie district. Davis was also responsible for the construction of several new GWS water storages including a 25Mg reservoir at Kalgoorlie and also the roofing of others. As diesel locomotives had replaced steam locos in most parts of the state the PWD took over from the WAGR the management of its redundant water reservoirs and tanks. Davis undertook a statewide joint inspection with a WAGR officer of all storages being transferred and was responsible for upgrading some in the Kalgoorlie district for more extended use. He was also responsible for setting new scheme water annual quotas for mines in the (Golden Mile) Mines Water Trust and devised the formula by which mines which exceeded their quotas had to pay for a percentage of the capital works required.

After only two years in Kalgoorlie Davis was recalled to Head Office in December 1956, on a temporary posting to work on the planning and design of the Comprehensive Water Supply Scheme but, after three months in Perth, his transfer to Perth was made permanent. The northern part of the Scheme involved the upgrading of the GWS main conduit and the construction of extension mains and reticulation to serve a large area of farmland and towns in the eastern and north-eastern wheat-belt. In 1962 the Goldfields Water Supply Branch was combined with the Country Water Supplies section of the Hydraulic Engineer's Branch to form the Country Water Supply Branch. Davis was appointed Senior Engineer (North) of the new branch and became responsible for the engineering districts of Geraldton, Northam, Merredin and Kalgoorlie. In July 1968 he became Principal Assistant Engineer in the branch under V.F. Taylor, CWS Engineer.

In 1975 four of the functionally-based state-wide branches of the PWD which dealt with water supplies, irrigation and drainage, sewerage and major construction works were reorganised on a regional basis into two branches, Operations North and Operations South. In June 1976 Davis was appointed Chief Engineer for Operations North in which position he was responsible for the operation, maintenance, extension and improvement of all public utilities in an area covering 91 per cent of the state. This included the Pilbara region in which there was a sustained period of rapid development. In the 1980s these works included the Harding Dam which is used conjunctively with the Millstream aquifer on the Fortescue River for water supplies to the West Pilbara. When a state-wide water authority, the Water Authority of Western Australia, was formed in 1985 by combining the Metropolitan Water Authority and the water related activities of the Public Works Department Davis was appointed Senior Executive Engineer, Field Services. He retired in 1986.

During the 1970s Davis served for several years as Chairman of the Lower North Regional Development Committee. He was also a Federal Councillor of the Association of Professional Engineers Australia and served the Institution of Engineers, Australia, on several committees including one dealing with the revision of courses at the Western Australian School of Mines. Jack Davis died in 2003 and was survived by his wife, a son and two daughters.

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- 1 Born 22 April 1924 in Boulder, Eastern Goldfields. Father was born at Kununalling and mother in Ballarat. Father was a salesman with a passion for football. Jack went to the Eastern Goldfields High School where he obtained a De Bernales scholarship to study at UWA.
- 2 The scholarship paid for accommodation at St George's College. He worked in the mines at Christmas except one year when six WA students worked for BHP at Whyalla. At the mines he worked underground surveying and in the assay office and electrician's shop. Started at the PWD after Easter 1946 as a probationary engineer at Harvey with 150 men under him.
- 3 From 1946 to November 1948 worked on Harvey East Drain, Waroona town water supply, a dam near Carnamah, and irrigation works at Harvey. At UWA did a three year wartime BSc Eng course, graduating in 1945, and went back for a fourth year to obtain a BE. Then went on a Gledden tour of the eastern states with Professor Blakey who was then the National President of the Institution of Engineers.
- 4 Transferred to Lake Grace in November 1948 to do dams and water supplies over a large area including Hopetoun, Corrigin, Quairading, Hyden, Karlgarin, and Newdegate and also raised Hyden rock dam at Wave Rock. Developed roaded catchments including a large one at Kulin (1950). Transferred To Wellington Dam in mid 1951.
- 5 Wellington Dam closed down in mid 1952 through lack of funds. Went to Kwinana in mid 1953 for 9 months to be in charge of all civil works on the BP refinery site. The 25 acre greeting to the Queen which she never saw.
- 6 Kellogs was the main contractor at Kwinana under Charlie de Groff and Hank Velda. Hank used to sack 6 or 7 men every morning. Claude Rebbeck who was the English site manager for Anglo-Iranian. He said that a Melbourne site had been ruled out because of lack of depth over the bar to the port.
- 7 Bought a suit with an Anglo-Iranian bonus before being told to return it by Jim Young Director of Engineering (but kept it). Returned to HO in Easter 1954 and transferred to Kalgoorlie in November 1954 as Grade 1 Engineer.
- 8 Wells and tanks from Leonora and Laverton to Norseman and Esperance. Inspection with Jack Lalor of WAGR railway dams throughout state when PWD took them over. Lalor couldn't leave until the footy season was over. Most dams were in good condition and were roofed. Put roaded catchments on some (Salmon Gums).
- 9 WAGR preferred to use own dam water to Mundaring water as less saline. Water from Karalee railway dam was gravitated into the pipeline. Replacement of wood and steel pipes. Length runners still used bikes. Built 25Mg Kalgoorlie No.3 dam (north of railway), bitumen lined. Built in very wet weather. At the opening rubbish came out of the pipe.
- 10 Also built 12Mg tank at Dedari and took over railway dam at Kalgoorlie. For new dams put in founds for roof posts and stump posts to allow for future roofing. Some wood stave pipes refurbished using Charlie Groves's system for reconstructing new tongue & groove joints.

- 11 Bill Francis last officer-in-charge of steam working at Mundaring. Pump station villages under the authority of the Machinery Super.
- 12 Oscillation of wood pipes under steam working. 40 miles of wood pipe at Koorarawalyee. Wire restapled onto staves. Only leaked at joints.
- 13 Water temperatures not worried much about until the meningitis problem. A few deaths in small swimming pools. No chlorination until about 1960.
- 14 Leads joints replaced by continuous welding. Stolen lead not easy to sell, especially when not melted down. Setting quotas for the (Golden Mile) Mines Trust. If extra water needed mines had to pay for capital works required.
- 15 Encouraged dams for municipal use. Effluent reuse also introduced for municipal ovals with restrictions on timing of watering. Only spent 2 years in Kalgoorlie as recalled to HO at Christmas 1955 while Keating went on leave.
- 16 But after 3 months was told that the move to Perth would be permanent. Difficult with two small kids (first born at Collie in 1952 and second at Belmont in 1956). Working on Comprehensive Scheme. All farmland retic. was in asbestos cement.
- 17 AC pipes coated inside with PF4 bitumen which caused some debate. Introduced PVC pipes but had to be made to Aus standards. Brother in law was selling unapproved PVC pipes. PVC for gravity sewers but Montgomery of Met Water Supply said lead introduced by extrusion. Had difficulty in using all allocated funds so had to order Fibrolite pipes before they were made.
- 18 Fibrolite and PVC pipes all underground. Smallest steel pipe was 12 in. diameter. All steel pipes cement lined. Chlorination at Mundaring caused corrosion of impellers if added on suction side. When added on delivery side removed old oil from steel mains and lowered C value. Keating added oil to counteract this in about 1960 but the oil started to come into manholes so stopped. Concerns about water quality. Length runners had to live in tents. At Koorarawalyee they had to run across GEH to get a shower. Evidence to tribunal on working & living conditions
- 19 Became Eng for Operations North in about 1964, Senior Eng Ops N. until 1968, PA Ops N. 1968-1975, then Chief Eng. Op N. Country WS and Goldfields WS were combined.
- 20 Keating became head of both, followed by Vince Taylor (family from the Woodline). None of the other EGHS scholarship boys became engineers. Don Aitken was a contemporary at St George's College.
- 21 Work of Ops N. mainly in Pilbara. South Hedland Inland Town. 600-700 working for him.
- 22 On the main conduit Construction, Operation and Maintenance in the same district were amalgamated. More mechanisation. In irrigation and drainage bull dozers introduced in 1948-49.
- 23 After marriage lived in Lake Grace, Kulin, Kalgoorlie, Rivervale, then Wembley in 1956. DEs in Kalgoorlie, Northam and Merredin had to buy their own homes although WAGR DEs were provided with houses. At Lake Grace provided with a minute demountable. Had lived in tents at Lake Grace earlier and ate at the hotel.